



Memorandum

TO: DOWNTOWN PARKING BOARD
SUBJECT: ON-STREET PARKING METER PILOT

FROM: Joe Garcia, DOT
DATE: 02-05-13

INFORMATION

BACKGROUND

In 2010 multi-space parking meters were installed in the Arena/Diridon area based on an analysis conducted on different meter technologies and the need for flexible rate structures and the ability to accept multiple forms of payment. Since the installation of multi-space meters several new meter technologies have been developed and implemented by cities throughout the nation. This report will provide a brief overview of some of these new technologies and outline the City's plan to test them via a meter pilot.

ANALYSIS

Existing Meter Technology in San Jose

There are currently 2,574 on-street metered spaces located within the City: 2,412 are controlled by single-space coin operated meters; and 162 are controlled by 16 multi-space pay-by-space meters. These metered spaces are located within four general geographic areas: Downtown (1,917), Japantown (217), Old Civic Center (278), and Arena/Diridon (162).

The majority of the existing single-space meters were upgraded to electronic meters in the past ten years. Although the upgrade to electronic meters was an improvement over the older mechanical meters, these meters as configured can not accept credit cards. The current meters also have severely limited reporting capabilities and require a labor intensive process to obtain revenue, diagnostic, or meter failure data.

The current single-space meters are powered by a standard 9-volt battery. This configuration requires the City to purchase and dispose of nearly 5,000 batteries per year. Additionally, the battery replacement process is labor intensive requiring approximately two weeks of meter shop staff time each year.

Meter malfunctions are currently detected and reported by meter collection staff, Parking and Traffic Control Officers, and via customer complaints. Malfunctions are usually addressed within 24 hours but can go undetected longer, resulting in meter down time and lost revenue.

New Meter Technologies

Technologies related to on-street parking have changed dramatically in recent years. Several of these technologies were analyzed for potential implementation in San Jose.

Single-Space Credit Card Enabled Meters – “Smart Meters”

Smart meters utilize existing meter infrastructure (poles and exterior meter housings) by simply replacing each meter’s existing internal mechanical hardware. They allow for payment flexibility through acceptance of coins and credit cards. Smart meters are also solar powered and communicate transaction and diagnostic information wirelessly.

Pros:

- Customer friendly (familiar look and feel)
- Pre-pay and credit card options
- Real time data (meter operational status, individual meter revenue detail)
- Support parking citation adjudication process with documented transactions

Cons:

- Cost (initial and on-going)

In Ground Parking Sensors

Parking sensors are small hockey puck shaped devices which are imbedded in the asphalt at each parking space and communicate occupancy status wirelessly. The sensors detect the arrival and departure of parked vehicles at on-street parking spaces. Data collected via sensors can be used for comprehensive occupancy analysis, rate setting, and enforcement.

Pros:

- Real time occupancy data
- Meter can reset to zero after vehicle vacates parking space
- Can reduce parking patrol frequency by receiving real time payment and occupancy data
- Support parking citation adjudication process with documented transactions

Cons:

- Cost (initial and on-going)
- Public perception (being watched)
- Impacted by street maintenance
- Potential sensor accuracy issues due to magnetic interference

Multi-Space Meters

This technology is currently in use by the Arena/Diridon area and in off-street parking lots. These meters are highly configurable, allow multiple payment options, communicate transaction and status information wirelessly, and can be solar powered.

Pros:

- Customer payment options (credit card)
- Less obstructed streetscape (fewer meters)

Cons:

- Cost (initial and on-going)

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- Potentially less convenient location for customer
- In the event a multi-space meter malfunctions, revenues for all the spaces assigned to that particular machine would be impacted
- Enforcement and collection procedures are less efficient

Pay-by-Phone

This feature can be integrated with existing and new meter technologies, and allows payment via smart phone applications or by dialing a dedicated service phone number. Pay-by-Phone vendors allow customers to create an account with a credit card and then pay for parking with their established account. This service allows customers to pay for parking, add time, and be reminded when their meter is going to expire.

Pros:

- Increase customer payment options
- Ability for customer to add time
- Reminder of approaching time limit
- Easy integration with existing meters
- Costs paid by customer (around \$0.40 per transaction)

Cons:

- Inability to display time on City's current meters
- Costly to integrate fully with Smart Meters
- Low customer usage at Smart Meter locations
- Enforcement becomes cumbersome if time is not displayed on meter

Meter Technology Pilot

After benchmarking with other cities currently utilizing the above noted technologies and meeting with various vendors, staff has implemented a meter pilot to test and analyze meter reliability, costs, revenue potential, customer perception, impacts on citation revenue and the value added by increased data collection of single-space credit card enabled meters and parking sensors. IPS Group Inc. was selected to provide both meters and sensors at no cost to the City for the duration of the pilot for the following reasons:

- Proven technology in use by many California cities including: San Francisco, Los Angeles, Walnut Creek, Santa Monica, Berkeley
- Seamless integration with existing meters and operations
- Solar power technology supports City's Green Vision
- Integration of IPS meters and sensors allows for a single vendor to provide all equipment

The pilot area includes the 61 metered spaces on Park Avenue and Market Street around Cesar Chavez Park. Twenty of these spaces will be equipped with parking sensors. (See Attachment) These specific spaces were chosen in part for the following reasons:

- Mix of varying time restrictions (30 min to 2 hr) allowing for more complete analysis
- Condensed geography of pilot area will allow for easy collection, enforcement, and repair
- Meters serve a variety of different types of businesses

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- Area experiences high occupancy and turnover rates allowing for rigorous testing and data collection

Staff collected pre-pilot data including: daily per meter revenue, parking occupancy levels and citation issuance. This data will be used as a baseline when analyzing the data collected during the pilot. While IPS will provide the meters and sensors at no cost to the City during the pilot, costs associated with meter and sensor management fees, as well as, credit card transaction fees will be the City's responsibility. These costs are estimated to not exceed \$10,000 for the pilot.

Staff worked with IPS during the week of February 4th to install the 61 Smart Meters and will follow up with the installation of the 20 sensors in early March. The pilot will last 90 days from the date of the sensor installation, after which, staff will follow up with a detailed report on the outcome of the pilot.

NEXT STEPS

A mid-pilot status update will be provided at the May DPB meeting and a comprehensive post-pilot report will be presented at the August DPB meeting. If the pilot is deemed successful in terms of reliability, meter data, revenue potential, and customer perception; staff will include recommendations for potential expansion with the post-pilot report.

Based upon current industry costs associated with installation and operation of newer technology meters, any broad upgrade to 'Smart Meters' would require a meter rate adjustment, and/or other revenue source to fund the capital and on-going operating costs. At this time, staff envisions bringing forward meter rate options to the DPB concurrently with any proposed meter upgrade.

ATTACHMENT

Meter Technology Pilot Area

<u>Time Limit</u>	<u># of Meters</u>
30 Min	14
60 Min	12
120 Min	35

- Sensored Spaces (Qty 20)
- Unsensored Spaces (Qty 41)

